UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,399	09/30/2003	Christopher Midgley	NTK-006.01	6490

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ART UNIT	PAPER NUMBER
2163	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/675,399	MIDGLEY ET AL.
	Examiner	Art Unit	
	Uyen T. Le	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on <u>21 August 2006</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-6,10,11,13-23,38,40,41,43-48,50,52,53 and 55-69* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-6,10,11,13-23,38,40,41,43-48,50,52,53 and 55-69* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21

August 2006 has been entered.

Response to Amendment

2.   Applicant's amendment to claim 61, 64, 67 is acknowledged. Consequently,

rejection to claims 2-6, 10, 11, 13-23, 38, 40, 41, 43-48, 50, 52, 53, 55-69 under 35

U.S.C. 112, first paragraph is withdrawn.

3.   Applicant's explanations regarding claims 61, 65, 67 have been fully considered

but the claims as amended are not clear. The preamble of claims 61, 64, 67 mention a

sequence of storage times. The body of the claims recites "the previous storage time",

"that storage time". It is not clear whether each of those storage times applies to the

source storage or the backup storage. The claims as amended thus raise new issues of

35 U.S.C. 112, second paragraph discussed below.

        The examiner is treating those storage times as the time a synchronization

request is submitted by the backup storage because the specification does not discuss

any sequence of storage times nor define any storage time. Based on this interpretation

of the claimed storage time, all claims have been rejected using the references of

record because the claims as amended still read on those references.

Claim Rejections - 35 USC § 112

4.   Claims 2-6, 10, 11, 13-23, 38, 40, 41, 43-48, 50, 52, 53, 55-69 are rejected under

35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps,

such omission amounting to a gap between the steps. See MPEP § 2172.01. The

omitted steps are: sending the latest change at identified location to the backup storage

system. It is not clear how the backup storage system obtain any content for storage.

Claims 61, 64, 67 "the previous storage time" in limitation A) is ambiguous. Note

that the claims recite source files stored on a source storage system and also a backup

storage system. Since the specification does not discuss any sequence of storage

times, it is not clear what "storage time" is intended to mean.

Art rejection is applied to claims 2-6, 10, 11, 13-23, 38, 40, 41, 43-48, 50, 52, 53,

55-69 as best understood in light of the rejection under 35 U.S.C. 112, second

paragraph discussed above.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5.   Claims 2, 3, 4, 10, 11, 15, 38, 40, 41, 45, 50, 52, 53, 57, 61-69 are rejected under 35 U.S.C. 102(b) as being anticipated by Zollinger et al (US 5,999,947) of record.

Regarding claim 61, Zollinger discloses a method for maintaining information in a backup storage system (see the abstract, Figures 1-7). The claimed "dynamically identifying locations ...previous storage time" reads on the fact that the method of Zollinger periodically creates different updates (see Figure 6). Clearly each update is identified by a location that has changed in the source storage system. The claimed "in response to thus identifying locations...with those locations" is met when Zollinger shows at the time a client requests synchronization, the new version is transmitted with the instructions to the client so that the database table is made current with the original managed on the server (see the abstract, Figure 4).

Claims 62, 63 merely read on the fact that changes are detected in source data files in the method of Zollinger (see the abstract). Clearly each file has to be at a location in the source storage system.

Claims 64-69 correspond respectively to a computer program product and computer system for performing the method of claims 61-63, thus are rejected for the same reasons stated in claims 61-63 above.

Regarding claim 2, Zollinger discloses the storage time is based on a time interval when Zollinger shows that the client request is intermittent (see the abstract).

Regarding claims 3, 4, Zollinger discloses generating a baseline image of a file prior to detecting changed locations when Zollinger shows the base table (see step 90, Figure 5).

Regarding claim 10, Zollinger discloses selecting at least one memory to store the content when Zollinger shows storing different versions (see Figure 5).

Regarding claim 11, Zayas teaches the concept of selecting a memory distinct from a previously selected memory associated with a prior storage time when Zayas shows different versions of a table are stored (see Figure 4).

Regarding claim 15, Midgley discloses using the stored contents to create a version of a selected one of the one or more data files (see column 22, lines 24-34).

Claims 38, 40, 41, 45 and 50, 52, 53, 57 correspond to a computer program product and system for performing the method of claims 2, 10, 11, 15, thus are rejected for the same reasons stated in claims 2, 10, 11, 15 discussed above.

6.   Claims 2-6, 10, 11, 13, 15-19, 38, 40, 41, 43, 45-48, 50, 52, 53, 55, 57-69 are rejected under 35 U.S.C. 102(a), (e) as being anticipated by Midgley et al (US 6,460,055) of record, provided by the applicant.

Regarding claim 61, Midgley discloses all the claimed subject matter including limitation A) (see column 2, lines 17-30, Figure 7), and limitation B) (see Figure 3, column 2, lines 51-55).

Claims 62, 63 merely read on the fact that changes are detected in source data files in the method of Midgley. Clearly each file has to be at a location in the source storage system.

Claims 64-69 correspond respectively to a computer program product and computer system for performing the method of claims 61-63, thus are rejected for the same reasons stated in claims 61-63 above.

Regarding claim 2, Midgley discloses the storage time is based on an actual time interval when Midgley shows that the file is representative of the state of the file systems at a particular time (see column 2, lines 51-55).

Regarding claims 3, 4, Midgley discloses generating a baseline image of a file prior to detecting changed locations (see column 6, lines 55-67).

Claim 5 merely reads on the fact that hashing is used on the baseline image and the second image for detecting changes. The method of Midgley clearly operates in that manner for identifying changes to a data file (see column 2, line 51- column 3, line 10).

Regarding claim 6, Midgley discloses CRC procedures (see column 2, line 67-column 3, line1).

Regarding claim 10, Midgley discloses selecting at least one memory to store contents (see column 9, lines 28-38).

Regarding claim 11, the selected memory has to be distinct form a previously selected memory since each memory is storing a version of changes (see column 2, lines 5-15).

Regarding claim 13, Midgley discloses generating one or more indexes as claimed (see Figure 2).

Regarding claim 15, Midgley discloses using the stored contents to create a version of a selected one of the one or more data files (see column 22, lines 24-34).

Claim 16 is met by the fact that indexes are created for accessing different versions of a data file (see column 10, lines 25-35, column 18, lines 23-41). Furthermore, different versions have to be created by combining identified stored contents with data from a baseline image associated with the selected data file as claimed.

Regarding claim 17, Midgley discloses determining that the changed locations are the same for two or more different storage times and identifying the stored contents of the changed locations associated with the latest of the two or more different storage times (see column 21, line 63- column 22, line 15).

Claim 18 merely differs from claim 16 by adding "receiving from a first server a request to create a version of a selected one of the one or more data files" and "providing the identified stored contents and respective changed locations to the first server". Midgley teaches such limitations (see column 12, lines 49-60).

Regarding claim 19, Midgley discloses at the first server combining the identified stored contents with data from a baseline image associated with the selected data file (see column 12, lines 60-66).

Claims 38, 40, 41, 43, 45-48 and 50, 52, 53, 55, 57-60 correspond to a computer program product and system for performing the method of claims 10, 11, 13, 15, 16, 18,

19, thus are rejected for the same reasons stated in claims 2, 10, 11, 13, 15, 16, 18, 19

discussed above.

Claim Rejections - 35 USC § 103

7.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 14, 20-23, 44, 56 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Midgley et al (US 6,460,055) of record, provided by the applicant.

Regarding claims 14, 44, 56, although Midgley does not specifically show a first

and second index as claimed, since indexing help speed up searching, it would have

been obvious to one of ordinary skill in the art to include any number of indexes

depending on users applications and requirements.

Regarding claims 20, 21, Midgley teaches coalescing (see column 21, line 66-column 22, line 49) and the use of indexes (see column 6, lines 2-27). Although Misgley does not specifically show coalescing two or more stored contents associated with the same file identifier and two or more different storage times or the same storage time, the respective changed locations associated with the two or more coalesced contents, one or more indexes to associated the coalesced contents, the respective coalesced changed locations, the file identifier and the same of two or more different storage time, it would have been obvious to one of ordinary skill in the art to do so depending on users requirements.

Regarding claim 22, Midgley discloses the coalescence time is based on an actual time (see column 22, lines 6-10).

Regarding claim 23, Midgley discloses the event includes an event based on an available storage capacity of a storage medium when Midgley shows buffer capacity (see column 18, lines 64-66).

9.   Claims 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zollinger et al (US 5,999,947) of record, in view of Donoho et al (US 2002/0091779) of record.

Regarding claim 5, although Zollinger does not specifically show using one or more data integrity procedures to generate a summary of the baseline image, it is customary to do so as shown by Donoho (see 0293). Therefore, it would have been obvious to one of ordinary skill in the art to include the claimed features while

implementing the method of Zollinger in order to ensure integrity of backup files using a

well-known technique.

Regarding claim 6, Donoho discloses CRC and MD5 procedures (see 0293).

10.   Claims 13, 14, 16-19, 43, 44, 46, 47, 48, 55, 56, 58, 59, 60 are rejected under 35

U.S.C. 103(a) as being unpatentable over Zollinger et al (US 5,999,947) of record, in

view of Steele et al (US 2003/0191737) of record.

Regarding claim 13, although Zollinger does not specifically show generating one

or more indexes to associated the stored contents, the respective storage times, the

respective changed locations and the respective one or more file identifiers, it is well

known in the art to use indexing to facilitate searching as shown by Steele (see the

abstract). Therefore, it would have been obvious to one of ordinary skill in the art to

include one or more indexes while implementing the method of Zollinger to facilitate

searching.

Claim 14 merely reads on the fact that more than one index is generated. Since

indexes facilitate searching, it would have been obvious to one of ordinary skill in the art

to include any number of indexes depending on users requirements.

Regarding claim 16, although Zollinger does not specifically show querying one

or more indexes to identify stored contents and respective changed locations as

claimed, it is well known in the art as shown by Steele to use indexing to facilitate

searching (see the abstract). Therefore, it would have been obvious to one of ordinary

skill in the art to include the claimed features while implementing the method of Zollinger

in order to quickly identify stored contents and locations. Furthermore, creating a new version clearly includes combining the identified stored contents with data from a baseline image associated with the selected data file as claimed.

Regarding claim 17, Zollinger discloses determining that the changed locations are the same for two or more different storage times and identifying the stored contents of the changed locations associated with the latest of the two or more different storage times when Zollinger shows the method determines two versions of a table and identifies the latest version (see Figure 5).

Claim 18 merely differs from claim 16 by adding "receiving from a first server a request to create a version of a selected one of the one or more data files" and "providing the identified stored contents and respective changed locations to the first server". Zollinger teaches such a request when Zollinger shows clients requesting and receiving synchronization (see the abstract). Note that although the request is from a client in the method of Zollinger, since a client can also serve as a server depending on its role at a specific time, it would have been obvious to one of ordinary skill in the art to make the client in the method of Zollinger a server depending on users requirements.

Claim 19 merely reads on the fact that the current table is formed by combining a reference table and changes made to the reference table (see Figure 5).

Claim 28 essentially recites the limitations of claim 18, thus is rejected for the same reasons stated in claim 18 above.

Claims 43, 44, 46-48, 55, 56, 58-60 correspond to the computer program product

and system for performing the method of claims 13, 14, 16, 18, 19, thus are rejected for

the same reasons discussed in claims 13, 14, 16, 18, 19 above.

11.   Claims 20-23, are rejected under 35 U.S.C. 103(a) as being unpatentable over

Zollinger et al (US 5,999,947) of record, further in view of Steele et al (US

2003/0191737) of record, further in view of Midgley et al (US 6,460,055) of record,

provided by the applicant.

Regarding claims 20, 21, although Zollinger does not specifically teach

coalescing and the use of index, Steele shows that it is well known in the art to use

indexing to facilitate searching as shown by Steele (see the abstract). Therefore, it

would have been obvious to one of ordinary skill in the art to include such features while

implementing the method of Zollinger to facilitate searching. Furthermore, Midgley

teaches coalescing (see column 21, line 66- column 22, line 49). Although Misgley does

not specifically show coalescing two or more stored contents associated with the same

file identifier and two or more different storage times or the same storage time, the

respective changed locations associated with the two or more coalesced contents, one

or more indexes to associated the coalesced contents, the respective coalesced

changed locations, the file identifier and the same of two or more different storage time,

it would have been obvious to one of ordinary skill in the art to do so depending on

users requirements.

Regarding claim 22, Midgley further discloses the coalescence time is based on an actual time (see column 22, lines 6-10).

Regarding claim 23, Midgley further discloses the event includes an event based on an available storage capacity of a storage medium when Midgley shows buffer capacity (see column 18, lines 64-66).

Conclusion

12.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ohran (US 6,397,307) teaches mirroring and archiving mass storage by transferring only the last changes.

13.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uyen T. Le whose telephone number is 571-272-4021. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

14.   Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

2 September 2006

**UYEN LE
PRIMARY EXAMINER**